ESCI 504 Class Syllabus
Spring Semester, 2017
John B. Anderson
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T, Th 10:50-12:05
Room 128

Learning Outcomes

1. Students will gain an understanding of criteria used to identify clastic depositional systems from field and subsurface data sets.
2. Students will learn the stratigraphic and facies method as used to reconstruct Earth history, focusing on such factors as paleoclimate and eustatic controls of sedimentation and stratigraphic evolution.
3. Students will learn how to use this information to predict the stratographic occurrence of hydrocarbons and water in the subsurface.
4. Students will examine human impacts on different environments and how to use geological data to develop long-term (pre-historic) records of climate change and its influences on Earth systems.

There will be three exams, all to be taken during class hours

1/10 - Introduction and tools of the trade
1/12- No Class Today
1/17- Alluvial Fans
1/19– Fluvial geomoprhology and braided rivers
1/24 –1/26 Meandering Rivers
1/31 – Fluvial response to base level and climate change
2/2-2/7 – Delta classification, sedimentation and facies
2/9-Spring Recess
2/14 -Delta evolution-response to allocyclic and autocylic change
2/26 Exam
2/21 - Coastal processes
2/23 - Coastal sediments and facies
2/28 - Regressive versus transgressive coastal successions, barriers
3/2-3/7 Estuary and lake environments
3/9 Continental Shelf processes and deposits
3/13-3-17 Spring Break
3/21 Test
3/23 - Continental slope processe
3/28 -3/30- Deep Sea Fans
4/4 AAPG-No Class
4/6-4/13 – Glacial environments and sedimentation
4/18 Review
4/20- Third exam